

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**P2005-0610WO**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/JP2005/018440**

International filing date (day/month/year)  
**05.10.2005**

Priority date (day/month/year)  
**12.10.2004**

International Patent Classification (IPC) or both national classification and IPC

Applicant  
**Kao Corporation**

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

WRITTEN OPINION OF THE  
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International application No.

PCT/JP2005/018440

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ the translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

1-17

YES

Claims

NO

Inventive step (IS)

Claims

1-13

YES

Claims

14-17

NO

Industrial applicability (IA)

Claims

1-17

YES

Claims

NO

2. Citations and explanations:

Document 1: JP 8-209600 A (K.K. Tomoku), 13 August 1996, paragraphs 0026, 0029 and 0041-0047, drawings

Document 2: JP 6-86843 U (Kiyoshi KITA), 20 December 1994, paragraphs 0004 and 0005, drawings

- Claims 1-13

The inventions relating respectively to claims 1-13 are not described in any of the documents cited in the ISR; nor would they be obvious to a party skilled in the art.

Therefore, the inventions relating to claims 1-13 appear to be novel and involve an inventive step.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- Claims 14 and 16

Claims 14 and 16 have a description such as "a corner portion has a sharp point"; however, according to this description, the sharpness of the corner portion point is uncertain and, as a result, the inventions relating to claims 14 and 16 cannot be found to be clear.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: V

- Claims 14 and 15: Document 1

Document 1 (paragraphs 0041-0047, and drawings) describes a board obtained by attaching a fiber material to a formed surface (corresponding to papermaking of the invention relating to claim 14 of the present application) and thereafter heating and pressing the same (corresponding to a fiber formed article of the invention relating to claim 14 of the present application). Also, document 1 (paragraph 0026 and drawings) describes that the board has both side edges provided with a flat flange formed at the side edges of a curved part and that, at an intersection point of the curved part and flat flange (corresponding to an intersection point of two planes of the invention relating to claim 14 of the present application), a corner portion is formed. Further, document 1 (paragraph 0029) describes that a cylindrical body can be obtained by joining the flanges at both side edges.

Document 1 has no description that a corner portion formed at an intersection point of two planes has a sharp point; however, smoothening the inner wall of a hollow fiber structure in accordance with a purpose is a mere matter that is generally carried out by a party skilled in the art and, in order to smoothen a joining part in an inner wall, sharpening the corner portion positioned at the joining part would be carried out without any difficulty based on the idea of a party skilled in the art; therefore, in order to smoothen a joining part of a cylindrical body, sharpening the corner portion could be easily conceived of by a party skilled in the art and, in accordance with a desired smoothness, reducing the curvature radius of the corner portion to set the upper limit defined in the invention relating to claim 15 would not be difficult.

Also, the effects thereof would not be remarkable.

Therefore, the inventions relating to claims 14 and 15 of the present application do not appear to involve an inventive step.

- Claims 16 and 17: Document 2

Document 2 (paragraphs 0004 and 0005, drawings) describes a mold formed by combining a mixture of a shredded recycled paper and bond (corresponding to a fiber formed article defined in the invention relating to claim 16 of the present application); therefore, in view of the constitution of a conventional mold and the drawings of document 2, a fiber formed article constituting a mold is found to have a corner portion at a matching surface.

Document 2 has no description that a corner portion has a sharp point; however smoothening the inner surface of a mold in accordance with a purpose is a mere matter that is generally carried out by a party skilled in the art. Therefore, in order to smoothen the joining part of an inner wall, sharpening the corner portion is a matter that can be carried out without any difficulty based on the idea of a party skilled in the art, and sharpening the corner portion could be easily conceived of by a party skilled in the art. Thus, in the invention described in document 2, for the purpose of smoothening the matching surface of the mold inner wall, sharpening a corner portion could be easily conceived of by a party skilled in the art and, in accordance with a desired smoothness, reducing the curvature radius of the corner portion to set the upper limit defined in the invention relating to claim 17 would not be difficult.

Also, the effects thereof would not be remarkable either.

Therefore, the inventions relating to claims 16 and 17 of the present application do not appear to involve an inventive step.